

Lab Name	Lab. Sampl Lab. Design	Lab Job # Lab. Project	BASIN Report I. D.	NEW SITE ISTRM_DESCR	NEW SITE
DPW	467.001		UA	Howardsville gage	A55
DPW	467.002		UA	Howardsville gage	A55
DPW	467.003		UA	Howardsville gage	A55
DPW	467.004		UA	Howardsville gage	A55
DPW	467.005		UA	Howardsville gage	A55
DPW	467.006		UA	Howardsville gage	A55
DPW	467.007		UA	Howardsville gage	A55
DPW	467.008		UA	Howardsville gage	A55
DPW	467.009		UA	Howardsville gage	A55
DPW	467.01		UA	Howardsville gage	A55
DPW	467.011		UA	Howardsville gage	A55
DPW	467.012		UA	Howardsville gage	A55
DPW	467.013		UA	Howardsville gage	A55
DPW	467.014		UA	Howardsville gage	A55
DPW	467.015		UA	Howardsville gage	A55
DPW	467.016		UA	Howardsville gage	A55
DPW	467.017		UA	Howardsville gage	A55
DPW	467.018		UA	Howardsville gage	A55
DPW	467.019		UA	Howardsville gage	A55
DPW	467.02		UA	Howardsville gage	A55
DPW	467.021		UA	Howardsville gage	A55
DPW	467.022		UA	Howardsville gage	A55
DPW	467.023		UA	Howardsville gage	A55
DPW	103.299		UA	13th St Br	A68
DPW	103.3		UA	13th St Br	A68
DPW	103.301		UA	13th St Br	A68
DPW	103.302		UA	13th St Br	A68
DPW	103.303		UA	13th St Br	A68
DPW	103.304		UA	13th St Br	A68
DPW	103.305		UA	13th St Br	A68
DPW	103.306		UA	13th St Br	A68
DPW	103.307		UA	13th St Br	A68
DPW	103.308		UA	13th St Br	A68
DPW	103.309		UA	13th St Br	A68
DPW	103.31		UA	13th St Br	A68
DPW	103.311		UA	13th St Br	A68
DPW	103.312		UA	13th St Br	A68
DPW	103.313		UA	13th St Br	A68
DPW	103.314		UA	13th St Br	A68
DPW	103.315		UA	13th St Br	A68
DPW	103.316		UA	13th St Br	A68
DPW	103.317		UA	13th St Br	A68
DPW	103.318		UA	13th St Br	A68
DPW	103.319		UA	13th St Br	A68
DPW	103.32		UA	13th St Br	A68
DPW	103.321		UA	13th St Br	A68
DPW	103.322		UA	13th St Br	A68

NATION	COLL SITE	Other	Allia	DMG & Ot	USGS	AML	MIS	NOM	MS	SAMPLE	N	DATE	TIME_24H	AGENCY	COMMENT
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2/7/2014	9:45:00	CRW	
3/5/2014	9:30:00	CRW	
3/21/2014	16:30:00	CRW	Special study
3/22/2014	9:30:00	CRW	Special study
3/25/2014	16:45:00	CRW	Special study
3/26/2014	8:15:00	CRW	Special study
4/4/2014	18:00:00	CRW	Special study
4/5/2014	9:00:00	CRW	Special study
4/9/2014	18:00:00	CRW	Special Study
4/10/2014	7:15:00	CRW	Special study
4/10/2014	9:00:00	CRW	Special study
4/17/2014	18:30:00	CRW	Special study
4/18/2014	7:00:00	CRW	Special study
4/25/2014	18:15:00	CRW	Special study
4/26/2014	6:30:00	CRW	Special study
5/1/2014	9:45:00	CRW	Special study
6/6/2014	12:40:00	CRW	
7/1/2014	13:10:00	CRW	
8/1/2014	13:05:00	CRW	Turbid, raining pa
9/5/2014	9:00:00	CRW	
10/2/2014	8:40:00	CRW	September rain a
11/7/2014	8:30:00	CRW	low flow nutrient
12/5/2014	9:45:00	CRW	
1/8/2014	10:00:00	CRW	filtered in lab
2/7/2014	10:30:00	CRW	
3/5/2014	10:15:00	CRW	
3/21/2014	17:15:00	CRW	Special study
3/22/2014	10:15:00	CRW	
3/25/2014	17:45:00	CRW	Special Study
3/26/2014	9:00:00	CRW	Special study
4/4/2014	18:45:00	CRW	Special study
4/5/2014	10:00:00	CRW	Special study
4/9/2014	18:45:00	CRW	Special study
4/10/2014	8:00:00	CRW	Special study
4/10/2014	9:30:00	CRW	
4/17/2014	19:15:00	CRW	Special study
4/18/2014	7:45:00	CRW	Special study
4/25/2014	18:45:00	CRW	Special study
4/26/2014	7:15:00	CRW	Special study
5/1/2014	10:15:00	CRW	Special study
6/6/2014	13:20:00	CRW	
7/1/2014	12:45:00	CRW	
8/1/2014	12:15:00	CRW	Turbid, raining pa
9/5/2014	10:45:00	CRW	
10/2/2014	9:25:00	CRW	September Rain a
11/7/2014	9:30:00	CRW	
12/5/2014	10:45:00	CRW	

TYPE	PURPOSE	LAT_DD	LONG_DD	ELEV_FT	daily mean flow_CFS	instantane FLOW_CFS	EST_Q_GP PH	pH-lab
		37.8286	107.6083	9630				6.29
		37.8286	107.6083	9630				6.23
		37.8286	107.6083	9630				7.66
		37.8286	107.6083	9630				7.7
		37.8286	107.6083	9630				7.63
		37.8286	107.6083	9630				7.59
		37.8286	107.6083	9630				7.66
		37.8286	107.6083	9630				7.69
		37.8286	107.6083	9630				7.64
		37.8286	107.6083	9630				7.59
		37.8286	107.6083	9630				7.69
		37.8286	107.6083	9630				7.58
		37.8286	107.6083	9630				7.67
		37.8286	107.6083	9630				7.68
		37.8286	107.6083	9630				7.69
		37.8286	107.6083	9630				7.63
		37.8286	107.6083	9630				7.52
		37.8286	107.6083	9630				8.09
st 3 days		37.8286	107.6083	9630				7.8
		37.8286	107.6083	9630				7.76
nd snow		37.8286	107.6083	9630				7.62
		37.8286	107.6083	9630				7.66
		37.8286	107.6083	9630				7.16
		37.8111	107.6586	9320				6.2
		37.8111	107.6586	9320				6.18
		37.8111	107.6586	9320				6.13
		37.8111	107.6586	9320				7.44
		37.8111	107.6586	9320				7.5
		37.8111	107.6586	9320				7.46
		37.8111	107.6586	9320				7.54
		37.8111	107.6586	9320				7.42
		37.8111	107.6586	9320				7.41
		37.8111	107.6586	9320				7.47
		37.8111	107.6586	9320				7.68
		37.8111	107.6586	9320				7.53
		37.8111	107.6586	9320				7.38
		37.8111	107.6586	9320				7.38
		37.8111	107.6586	9320				7.55
		37.8111	107.6586	9320				7.56
		37.8111	107.6586	9320				7.53
		37.8111	107.6586	9320				7.52
		37.8111	107.6586	9320				8.12
st 3 days		37.8111	107.6586	9320				7.79
		37.8111	107.6586	9320				7.72
nd snow		37.8111	107.6586	9320				7.61
		37.8111	107.6586	9320				7.64
		37.8111	107.6586	9320				7.04

TEMP_C	field Cond.	lab cond.	HARD_MG as CaCO3=	Field Alk mg/l	Phen_Alk Mg/l	Total alk. Mg/l	ACIDITY	CA_TOT_MCA_DIS_M
1			152		0	34	56.568	56.447
0			164		0	34	52.745	51.896
6.5			156		0	32	55.617	52.561
2			158		0	34	57.328	50.329
8.5			154		0	32	51.245	49.928
1.5			156		0	34	53.52	53.136
5			152		0	34	50.183	49.409
1.75			140		0	34	52.719	52.254
6			128		0	34	44.996	44.771
1			132		0	36	44.96	44.536
1			134		0	34	43.523	42.813
9.5			124		0	30	41.82	41.11
1			122		0	32	42.937	39.071
6			94		0	28	31.056	30.844
2			88		0	26	31.176	27.73
3			120		0	30	40.11	39.382
9			48		0	18	21.834	25.894
11.5			66		0	22	22.344	22.404
12			96		0	28	32.221	33.281
7			132		0	34	63.184	64.821
1.5			104		0	32	49.062	52.625
1			130		0	36	40.716	40.179
1			138		0	32	51.939	49.936
0			172		0	36	61.496	60.315
0.5			184		0	34	65.723	59.973
0.5			90		0	34	60.951	60.348
4.5			188		0	28	61.889	61.57
1			188		0	30	61.633	61.816
6			194		0	28	60.165	59.935
1			190		0	28	62.472	62.051
3.5			176		0	30	60.818	60.31
1.75			200		0	30	61.273	60.474
5			148		0	26	53.222	52.954
0.5			136		0	28	53.655	50.255
1			156		0	30	55.106	52.158
7			148		0	26	49.135	45.948
1			138		0	32	45.625	44.026
6			98		0	28	31.106	29.999
2			92		0	26	29.415	29.426
2.5			132		0	28	40.383	39.298
9			54		0	20	25.109	24.508
10.5			70		0	22	22.617	22.005
11.5			102		0	30	34.501	32.186
9.5			138		0	36	66.714	64.672
2			100		0	32	49.517	48.627
2.5			142		0	36	43.785	43.578
2			154		0	36	54.072	53.592

Ca as Ca	CCMG_TOT_IMG_DIS_NAL_TOT	AL_DIS	AG_TOT	AG_DIS	AS_TOT	AS_DIS	AU_DIS
Totals							
3.459	3.45	19	15		0	0	
3.185	3.202	21	21		0	0	
3.216	2.89	27	23		0	0	
3.342	2.564	28	0		0	0	
2.609	2.533	32	23		0	0	
3.066	3.077	33	23		0	0	
2.537	2.589	34	23		0	0	
3.071	3.074	29	20		0	0	
2.776	2.716	189	33		0	0	
2.755	2.716	57	17		0	0	
2.312	2.301	54	27		0	0	
2.668	2.715	91	33		0	0	
2.762	2.347	74	27		0	0	
2.051	2.012	245	51		0	0	
1.983	2.176	290	55		0	0	
2.652	2.645	70	32		0	0	
1.888	1.404	673	36		0	0	
1.603	1.596	236	57		0	0	
2.543	2.456	276	62		0	0	
3.458	3.357	87	43		0	0	
3.612	3.34	370	93		0	0	
3.153	3.09	45	37		0	0	
3.391	3.517	28	26		0	0	
3.922	3.853	186	28		0	0	
3.934	3.429	194	48		0	0	
3.849	3.854	304	49		0	0	
4.134	4.136	627	80		0	0	
4.034	4.051	552	60		0	0	
4.14	4.117	745	93		0	0	
4.133	4.165	609	81		0	0	
4.058	4.058	607	103		0	0	
3.8	3.848	639	86		0	0	
3.529	3.434	1122	93		0	0	
3.615	3.22	545	100		0	0	
3.721	3.31	384	65		0	0	
3.401	2.777	601	111		0	0	
3.09	2.945	410	79		0	0	
1.868	1.913	335	110		0	0	
2.119	2.1	379	115		0	0	
2.587	2.515	287	58		0	0	
1.789	1.588	644	70		0	0	
1.703	1.648	204	79		0	0	
2.559	2.291	459	108		0	0	
3.397	3.31	120	70		0	0	
3.106	3.031	316	90		0	0	
3.365	3.351	125	60		0	0	
3.675	3.702	140	56		0	0	

B\_TOT    B\_DIS    BR\_DIS    SB\_TOT    SB\_DIS    BA\_TOT    BA\_DIS    BE\_TOT    BE\_DIS    CO\_TOT

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CO_DIS	CD_TOT	CD_DIS	CU_TOT	CU_DIS	CR_TOT	CR_DIS	CN_TOT_NFE_TOT	FE_DIS
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	0.59	0.51	0	0			157	119
	0.55	0.51	0	0			194	85
	0.5	0.38	0	0			104	77
	0.45	0.47	0	0			154	98
	0.46	0.41	0	0			100	69
	0.48	0.51	0	0			158	131
	0.45	0.44	0	0			103	83
	0.45	0.36	0	0			96	74
	0.56	0.49	3.2	0			394	125
	0.43	0.47	0	0			114	60
	0.43	0.41	0	0			113	35
	0.67	0.63	3.3	0			196	103
	0.52	0.59	3.2	2			100	50
	1.29	1.15	27.4	12.6			219	32
	1.34	1.15	26.1	15.8			226	68
	0.87	0.78	9.3	9.1			77	28
	1.3	0.91	16.7	4.7			673	24
	0.92	0.86	5.3	3			92	16
	0.81	0.77	4.6	2.5			103	31
	0.85	0.76	2.6	0			29	0
	1.28	1.34	11.1	6.8			58	26
	0.58	0.54	3.4	2.4			25	23
	0.47	0.45	2.2	2.3			144	92
	1.92	1.79	8.5	2.9			353	66
	1.8	1.82	8.2	2.3			377	69
	2.26	2.11	12.6	2.6			492	27
	4.22	4.03	22.7	3.4			543	20
	4.11	3.97	22.9	3.8			392	38
	4.97	4.84	29.3	5			507	22
	4.37	4.27	26.6	6.1			408	64
	4.58	4.46	26.4	5.2			410	45
	4.5	4.51	29.4	6.6			441	89
	4.17	3.91	45.4	7.6			1087	111
	3.71	3.64	23.7	7.2			464	123
	3.58	3.44	58.3	17.4			331	90
	3.31	3.25	24.7	7.7			375	32
	2.7	2.57	19.6	7.1			274	53
	1.77	1.65	24.2	11.9			270	46
	1.77	1.64	24.1	12.4			279	71
	2.33	2.12	18.2	5.3			250	21
	1.24	0.88	15.3	5.3			651	28
	0.91	0.9	5.3	3.2			118	38
	0.95	0.89	7	3.8			307	67
	1.2	1.1	5.9	3.3			163	42
	1.32	1.29	11.6	5.8			129	32
	1.27	1.15	6.1	3.2			166	20
	1.48	1.27	7	2.4			250	47

Ferrous	HG_TOT_MHG_DIS_MLI_TOT	LI_DIS	MN_TOT	MN_DIS	NI_TOT	NI_DIS	PB_TOT
			255.5	252.7			0
			291.2	283.4			0
			214.8	210.4			4.1
			216.4	206.6			4.6
			199.9	195.5			4.6
			220.6	223.2			4.6
			192.9	191			5.2
			202.1	203.2			3.8
			370.7	348.6			10.4
			215.4	208.5			4.6
			203.2	203.1			4.3
			266.6	261.4			5.6
			156.6	148.9			4.6
			306.9	267.6			16.8
			270.2	243.4			8.6
			196.3	186.2			4.9
			485	217.1			49.1
			374	355.4			5.7
			301.2	287.5			5
			341.8	331.2			0
			526.4	492.4			0
			201.1	196.7			3.4
			234.9	243.7			3.9
			2254.2	2234.4			0
			2579.3	2346.6			0
			3035.8	3023.7			3.1
			4664.8	4601.2			10.5
			4492.4	4491.2			8.3
			5852.3	5774.8			11.7
			4909.8	4898.4			8.5
			4965.8	4862.6			8.2
			4902.9	4708.8			8.9
			4853.7	4871.6			25.5
			3595.4	3409.3			9.6
			3686.3	3671			8
			3322.5	3338.5			10
			2493.3	2215			6.6
			1042.2	1033.5			12.4
			978.5	940.9			9.8
			1820.2	1731.8			7
			603.2	377.4			42.4
			519.5	493.2			5.3
			946.7	880.7			7.8
			961.2	928			0
			716.3	699.8			0
			1101.2	1095			4.1
			1518.5	1444.8			5.7



PB_DIS	SE_TOT	SE_DIS	SR_TOT	SR_DIS	TL_TOT	TL_DIS	V_TOT	V_DIS	ZN_TOT
0	0	0							249.4
0	0	0							250.2
3.4	0	0							200.9
4.1	0	0							230.5
3.7	0	0							198.8
4.1	0	0							239.8
3.8	0	0							198.1
3	0	0							218.7
3.1	0	0							255.4
0	0	0							211.9
3.2	0	0							209.2
0	0	0							270.7
4	0	0							237.7
3.4	0	0							452.1
3.7	0	0							431.3
0	0	0							354.5
0	0	0							373.7
3.1	0	0							275.8
0	0	0							208.6
0	0	0							235.9
0	0	0							354.3
0	0	0							231.8
3.4	0	0							239.8
0	0	0							565
0	0	0							576.6
0	0	0							703.1
4	0	0							1091.3
4.3	0	0							1114.8
4.3	0	0							1262.7
3.9	0	0							1182.8
4.3	0	0							1148.4
4.8	0	0							1219.4
4.6	0	0							1203.8
4.5	0	0							1009.3
4.2	0	0							1006.1
4.4	0	0							883.5
3.8	0	0							731.5
4	0	0							503.7
3.7	0	0							524.1
4	0	0							699.5
3	0	0							339.6
3.1	0	0							252.9
3.5	0	0							264.3
0	0	0							297.3
0	0	0							372.1
0	0	0							371.4
0	0	0							449

ZN\_DIS DIS\_OXY\_I DO SAT. TSS\_MG TDS\_MG T\_PHOS\_MP\_DIS\_MG PO4\_DIS\_I SI\_TOT\_M SI\_DIS\_MG

%

242.5

244.1

200

227.9

195.3

247.3

195.7

219.5

236.4

208.2

201.8

254.7

237.5

399

426.5

342.8

277.5

273.1

187.4

224.1

358.8

224.5

243.7

536.7

534.7

641

1018.6

1061.7

1179.9

1125.8

1086.1

1179.3

1058.5

972.5

923

834.2

705.3

470.9

490.8

633.2

263.5

239.3

229.3

270

333.8

348.7

416.6

NA_TOT_MNA_DIS_MCL_MG	F_MG	HCO3_MGCO3_MG	OH_MG	NH3_MG	NO2_MG	NO3_MG
				as N		
0.929	0.934					
0.882	1.017					
0.884	0.988					
1.048	0.739					
0.765	0.739					
0.9	0.897					
0.744	0.764					
0.933	0.926					
0.802	0.823					
0.808	0.789					
0.686	0.696					
0.737	0.738					
0.776	0.65					
0.53	0.485					
0.498	0.576					
0.662	0.701					
0.299	0.259					
0.297	0.308					
0.591	0.601					
0.752	0.73					
0.605	0.701					
0.722	0.709					
0.809	0.88					
1.076	1.053					
1.066	0.941					
1.03	1.038					
1.063	1.071					
1.062	1.077					
1.046	1.027					
1.096	1.127					
1.051	1.07					
1.011	1.028					
0.93	0.881					
0.884	1.014					
1.049	0.921					
0.871	0.689					
0.843	0.8					
0.434	0.457					
0.54	0.537					
0.643	0.63					
0.292	0.294					
0.349	0.336					
0.423	0.583					
0.79	0.762					
0.633	0.593					
0.8	0.808					
0.87	0.91					

NO2_NO3_K_TOT_M(KK_DIS_MGSO4_MG	BI_TOT	BI_DIS	GA_TOT	GA_DIS	MO_TOT	MO_DIS
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0.548	0.532
0.507	0.533
0.52	0.639
0.658	0.445
0.49	0.475
0.527	0.521
0.467	0.482
0.586	0.585
0.621	0.636
0.506	0.518
0.461	0.462
0.651	0.519
0.562	0.469
0.617	0.432
0.42	0.576
0.508	0.681
0	0
0.228	0.238
0	0
0	0
0	0
0.295	0.291
0.454	0.556
0.608	0.608
0.569	0.659
0.612	0.606
0.742	0.723
0.692	0.695
0.761	0.694
0.724	0.739
0.676	0.707
0.649	0.653
0.932	0.71
0.61	0.79
0.827	0.61
0.703	0.588
0.634	0.523
0.43	0.434
0.521	0.509
0.498	0.471
0	0
0	0
0	0
0	0
0	0
370	378
443	490

SN_TOT	SN_DIS	TI_TOT	TI_DIS	ZR_TOT	ZR_DIS	SiO2_TOT	SiO2_Dis	nSum	Catio	Sum	Anion
								meq/L		meq/L	

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Charge Balance	Sampler	Well Depth	Water level	Casing	water	DOC	TOC
meq/L		feet	feet	abv. Grd.	column		

## 2014 Data Comparing Howardsville Gage to A68

### Zinc

Date	Howardsville			A68	
	Flows (cfs)	Dis Zn Conc. (ug/l)	Dis Zn Load (lbs/day)	Flows (cfs)	Dis Zn Conc. (ug/l)
2/7/2014	9:45:00	17	243	22	535
3/5/2014	9:30:00	16	244	21	641
3/21/2014	16:30:00	21	200	23	1019
3/22/2014	9:30:00	18	228	22	1062
3/25/2014	16:45:00	21	195	22	1180
3/26/2014	8:15:00	21	247	28	1126
4/4/2014	18:00:00	27	196	28	1086
4/5/2014	9:00:00	21	220	25	1179
4/9/2014	18:00:00	33	236	42	1059
4/10/2014	7:15:00	45	208	51	973
4/10/2014	9:00:00	45	202	49	923
4/17/2014	18:30:00	54	255	74	834
4/18/2014	7:00:00	69	238	88	705
4/25/2014	18:15:00	139	399	299	471
4/26/2014	6:30:00	158	427	363	491
5/1/2014	9:45:00	67	343	124	633
6/6/2014	12:40:00	809	278	1210	264
7/1/2014	13:10:00	355	273	523	239
8/1/2014	13:05:00	111	187	112	229
9/5/2014	9:00:00	43	224	52	270
10/2/2014	8:40:00	138	359	267	334
11/7/2014		32	225	39	349
12/5/2014		25	244	33	417

### Cadmium

Date	Howardsville			A68	
	Flows (cfs)	Dis Cd Conc. (ug/l)	Dis Cd Load (lbs/day)	Flows (cfs)	Dis Cd Conc. (ug/l)
2/7/2014	9:45:00	17	0.51	0.05	1.82
3/5/2014	9:30:00	16	0.51	0.04	2.11
3/21/2014	16:30:00	21	0.38	0.04	4.03
3/22/2014	9:30:00	18	0.47	0.05	3.97
3/25/2014	16:45:00	21	0.41	0.05	4.84
3/26/2014	8:15:00	21	0.51	0.06	4.27
4/4/2014	18:00:00	27	0.44	0.06	4.46
4/5/2014	9:00:00	21	0.36	0.04	4.51
4/9/2014	18:00:00	33	0.49	0.09	3.91
4/10/2014	7:15:00	45	0.47	0.11	3.64
4/10/2014	9:00:00	45	0.41	0.10	3.44
4/17/2014	18:30:00	54	0.63	0.18	3.25
4/18/2014	7:00:00	69	0.59	0.22	2.57

4/25/2014	18:15:00	139	1.15	0.86	171	1.65
4/26/2014	6:30:00	158	1.15	0.98	200	1.64
5/1/2014	9:45:00	67	0.78	0.28	89	2.12
6/6/2014	12:40:00	809	0.91	3.97	1020	0.88
7/1/2014	13:10:00	355	0.86	1.65	454	0.9
8/1/2014	13:05:00	111	0.77	0.46	152	0.89
9/5/2014	9:00:00	43	0.76	0.18	53	1.1
10/2/2014	8:40:00	138	1.34	1.00	190	1.29
11/7/2014	8:30:00	32	0.54	0.09	54	1.15
12/5/2014	9:45:00	25	0.45	0.06		1.27

## Manganese

		Howardsville			A68	
		Flows	Dis Mn Conc.	Dis Mn Load	Flows	Dis Mn Conc
Date		(cfs)	(ug/l)	(lbs/day)	(cfs)	(ug/l)
2/7/2014	9:45:00	17	253	23	23	2347
3/5/2014	9:30:00	16	283	24	24	3024
3/21/2014	16:30:00	21	210	24	30	4601
3/22/2014	9:30:00	18	207	20	30	4491
3/25/2014	16:45:00	21	196	22	29	5775
3/26/2014	8:15:00	21	223	25	29	4898
4/4/2014	18:00:00	27	191	28	27	4863
4/5/2014	9:00:00	21	203	23	26	4709
4/9/2014	18:00:00	33	349	62	45	4872
4/10/2014	7:15:00	45	209	51	63	3409
4/10/2014	9:00:00	45	203	49	63	3671
4/17/2014	18:30:00	54	261	76	65	3339
4/18/2014	7:00:00	69	149	55	87	2215
4/25/2014	18:15:00	139	268	201	171	1034
4/26/2014	6:30:00	158	243	207	200	941
5/1/2014	9:45:00	67	186	67	89	1732
6/6/2014	12:40:00	809	217	947	1020	377
7/1/2014	13:10:00	355	355	680	454	493
8/1/2014	13:05:00	111	288	172	152	881
9/5/2014	9:00:00	43	331	77	53	928
10/2/2014	8:40:00	138	492	366	190	700
11/7/2014	8:30:00	32	197	34	54	1095
12/5/2014	9:45:00	25	244	33		1445

		Howardsville			A68	
		Hardness	Zinc Chronic	Cadmium Cl	Manganese Chronic	TVS Hardness
Date		(ug/l)				(ug/l)
2/7/2014	9:45:00	152	177	2.45	1896	184
3/5/2014	9:30:00	164	190	2.62	1945	90
3/21/2014	16:30:00	156	182	2.51	1913	188
3/22/2014	9:30:00	158	184	2.54	1921	188



3/25/2014	16:45:00	154	179	2.48	1905	194
3/26/2014	8:15:00	156	182	2.51	1913	190
4/4/2014	18:00:00	152	177	2.45	1896	176
4/5/2014	9:00:00	140	165	2.28	1845	200
4/9/2014	18:00:00	128	152	2.11	1791	148
4/10/2014	7:15:00	132	156	2.17	1809	136
4/10/2014	9:00:00	134	158	2.20	1819	156
4/17/2014	18:30:00	124	147	2.05	1772	148
4/18/2014	7:00:00	122	145	2.03	1763	138
4/25/2014	18:15:00	94	115	1.61	1616	98
4/26/2014	6:30:00	88	108	1.52	1581	92
5/1/2014	9:45:00	120	143	2.00	1753	132
6/6/2014	12:40:00	48	62	0.90	1292	54
7/1/2014	13:10:00	66	83	1.19	1436	70
8/1/2014	13:05:00	96	117	1.64	1627	102
9/5/2014	9:00:00	132	156	2.17	1809	138
10/2/2014	8:40:00	104	126	1.76	1671	100
11/7/2014	8:30:00	130	154	2.14	1800	142
12/5/2014	9:45:00	138	162	2.26	1836	154
	Ave. Hardne	126				140

Dis Zn Load (lbs/day)	Percent Load (Howard load/ A68 load)	Load Difference (lbs)	Ave. Inflow Conc. (change in load/change in flow, ug/l)
66	34%	44	1363
83	25%	62	1435
165	14%	142	2929
172	13%	150	2312
184	12%	162	3764
176	16%	148	3432
158	18%	130	#DIV/0!
165	15%	140	5210
257	16%	215	3319
330	15%	280	2883
314	16%	265	2726
292	25%	218	3679
331	27%	242	2499
434	69%	135	783
529	69%	166	733
304	41%	180	1518
1449	84%	239	210
586	89%	63	118
188	60%	76	343
77	67%	25	467
342	78% Note: Subs	75	267
102	38%	63	529

Dis Cd Load (lbs/day)	Percent Load (Howard load/ A68 load)	Load Difference (lbs)	Ave. Inflow Conc. (change in load/change in flow, ug/l)
0.23	21%	0.18	6
0.27	16%	0.23	5
0.65	7%	0.61	13
0.64	7%	0.60	9
0.76	6%	0.71	16
0.67	9%	0.61	14
0.65	10%	0.59	#DIV/0!
0.63	6%	0.59	22
0.95	9%	0.86	13
1.24	9%	1.12	12
1.17	9%	1.07	11
1.14	16%	0.96	16
1.21	18%	0.99	10

1.52	57%	0.66	4
1.77	55%	0.79	3
1.02	28%	0.74	6
4.84	82%	0.87	1
2.20	75%	0.56	1
0.73	63%	0.27	1
0.31	56%	0.14	3
1.32	75% Note: Subs	0.32	1
0.33	28%	0.24	2

Dis Mn Load (lbs/day)	Percent Load (Howard load/ A68 load)	Load Difference (lbs)	Ave. Inflow Conc. (change in load/change in flow, ug/l)
291	8%	268	8279
391	6%	367	8504
744	3%	720	14846
726	3%	706	10918
903	2%	881	20420
766	3%	741	17171
708	4%	680	#DIV/0!
660	3%	637	23632
1182	5%	1120	17310
1158	4%	1107	11411
1247	4%	1198	12341
1170	7%	1094	18444
1039	5%	984	10135
953	21%	752	4360
1015	20%	807	3565
831	8%	764	6439
2075	46%	1128	992
1207	56%	527	987
722	24%	550	2487
265	29%	188	3494
717	51% Note: Subs	350	1250
319	11%	285	2402















